REMARKS/ARGUMENTS

Claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109-110, 127-135 and 151 are currently pending in the application. Claims 30-34, 112 and 136-138 have been withdrawn from consideration in response to a restriction requirement with traverse. Claims 4-6, 9, 35-44, 46, 62-67, 70-108, 111, 113-126, 139-150 and 152 have been canceled without prejudice. Claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109-110, 127-135 and 151 were rejected in the Office Action mailed May 11, 2010 (hereinafter referred to as "Office Action").

This amendment is being submitted with a petition for a one month extension of time to extend the due date from August 11, 2010 to September 11, 2010. A credit card authorization is being submitted herewith to pay the required fees. Applicant respectfully submits that this response is timely filed on Monday, September 13, 2010 because the extended due date fell on Saturday, September 11, 2010. The Director is hereby authorized to charge any additional fees(s) or underpayments of fee(s) under 37. C.F.R. §§ 1.16 and 1.17 to Deposit Account 50-4863.

In view of the following remarks and amendments, applicants respectfully request a timely Notice of Allowance be issued in this case.

Claim Rejections under 35 U.S.C. § 112, first paragraph

The Office Action rejected claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Office Action indicated that the specification does not support the amended subject matter of "identifying previously unknown relationships between the data objects where no link previously existed." Applicants respectfully disagree.

Applicants respectfully submit that the identification of previously unknown relationships is described in great detail in the specification and drawings. For example, paragraphs [0244]-[0315] and the associated figures provide five examples of how the invention is used to identify previously unknown relationships. Moreover, "numerically evaluated to identify previously unknown relationships between an object query and the data objects using an average observed-to-expected ratio" is described in these examples as well as paragraphs [0200]-[0221] and other portion of the specification and figures.

As a result, applicants respectfully submit that claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151, as amended, comply with the written description requirement and are, therefore, allowable under 35 U.S.C. § 112, first paragraph. Applicants respectfully request reconsideration and withdrawal of the rejections to claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151.

Claim Rejections under 35 U.S.C. § 112, second paragraph

The Office Action rejected claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Applicants respectfully submit the foregoing amendments correct the language objected to in the Office Action. As a result, applicants respectfully submit that claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151, as amended, are not indefinite and are, therefore, allowable under 35 U.S.C. § 112. Applicants respectfully request reconsideration and withdrawal of the rejections to claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109, 127-135 and 151.

Claim Rejections under 35 U.S.C. § 103

The Office Action rejected claims 1-3, 7-8, 10-15, 17-29, 47-58, 109-110 and 151 under 35 U.S.C. § 103(a) as being unpatentable over Brown et al. (U.S. Patent No. 5,875,446) in view of Kennedy et al. (U.S. Patent No. 6,269,364). Claim 28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kennedy and Ellis, et al. (U.S. Patent No. 6,654,736). Claims 9-14, 17-20, 24-25 and 110 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kennedy, et al. (U.S. Patent No. 6,269,364). Claims 16, 26, 59-61, 64, 68 and 69 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kennedy and Adamic et al. (U.S. Published Patent Application 2003/0186243). Claim 45 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Brown in view of Kennedy and Hong, et al. (U.S. Patent No. 5,764,799). Claims 127-130 and 132-135 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Adamic in view of Brown and Kennedy. Claim 131 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Adamic in view of Brown, Kennedy and Deligne et al. (U.S. Patent No. 6,314,399). Applicants respectfully submit that claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109-110, 127-135 and 151, as amended, are patentable over the cited references for at least the reasons described below.

Claims 1, 109, 127 and 151

First, applicants respectfully submit that the cited references, either alone or in combination, do not disclose, teach or suggest:

the data objects from one or more domains of information, wherein <u>each data object consists of a noun, a verb, an adjective, an adverb, a phrase, a sentence, a symbol or a numeric character</u>; and

"a knowledge discovery engine where relationships between two or more integrated data objects within the Object-Relationship Database are . . .

numerically evaluated to identify previously unknown relationships between
an object query and the data objects using an average observed-to-expected
ratio"

as recited in claims 1, 109, 127 and 151. Applicants respectfully submit that the cited
references, such a Brown, group and rank relevant objects based on a topical search
engine. (col. 10, lines 61-67; col. 11, lines 12-22). Thereafter, Brown uses existing or
known links (e.g., geographical relationship links, categorization relationship links, etc.)
to find other documents (e.g., parent docments). (col. 10, lines 61-67; col. 11, lines 12-
22). As a result, Brown does not identify previously unknown relationships between an
object query and the data objects. Accordingly, claims 1, 109, 127 and 151, as amended,
are allowable under 35 U.S.C. § 103(a).

Second, applicants respectfully submit that the cited references, either alone or in
combination, do not disclose, teach or suggest "a knowledge discovery engine where
relationships between two or more data objects within the Object-Relationship Database
are: (a) identified as a direct relationship or an indirect relationship, (b) retrieved, (c)
grouped into categories selected from the group consisting of a positive effect, a negative
effect, a physical association and a logical association, (d) ranked based on a relative
strength of the identified relationship, (e) filtered by lexical processing, and (f)
numerically evaluated to identify previously unknown relationships between an object
query and the data objects using an average observed-to-expected ratio" wherein the data
objects "consist of a noun, a verb, an adjective, an adverb, a phrase, a sentence, a symbol
or a numeric character" as recited in claims 1, 109, 127 and 151, as amended. For
example the objects disclosed in Brown are defined as: "Hypermedia objects 140 are
items such as books, articles, reports, pictures, movies, or recordings that contain text,
images, video, audio, or any other multimedia object and/or information. One or more
hypermedia objects are stored on one or more computers in the environment." (col. 6,
lines 26-30). Applicants respectfully submit that although Brown's objects may contain
the data objects recited in claims 1, 109, 127 and 151, Brown does not disclose, teach or
suggest performing all of the recited steps on "a noun, a verb, an adjective, an adverb, a
phrase, a sentence, a symbol or a numeric character." The other cited references do not
cure this deficiency. As a result, claims 1, 109, 127 and 151, as amended, are allowable
under 35 U.S.C. § 103(a).

Third, applicants respectfully submit that the cited references, either alone or in
combination, do not disclose, teach or suggest "a knowledge discovery engine where
relationships between two or more integrated data objects within the Object-Relationship
Database are . . . numerically evaluated to identify previously unknown relationships
between an object query and the data objects *using an average observed-to-expected ratio*"
as recited in claims 1, 109, 127 and 151, as amended. Although Brown recites a Score
Rank computed by a topical search engine, the Score Rank is computed before Brown
searches for relationships. (col. 12, lines 1-8). Moreover, applicants respectfully submit
the Score Rank is not the same as an average observed-to-expected ration. As a result,

Brown's Score Rank is not used to identify previously unknown relationships between an object query and the data objects. The other cited references do not cure this deficiency. As a result, claims 1, 109, 127 and 151, as amended, are allowable under 35 U.S.C. § 103(a).

For at least the reasons stated above, applicants respectfully submit the cited references, either alone or in combination, do not disclose, teach or suggest every element recited in claims 1, 109, 127 and 151, as amended. Claims 1, 109, 127 and 151 are, therefore, allowable under 35 U.S.C. § 103(a). Accordingly, applicants respectfully request that the rejection of claims 1, 109, 127 and 151 be withdrawn.

Claims 2-3, 7-8, 10, 14-15, 17-29, 47-58, 110 128-130 and 132-135

Applicants respectfully submit that claims 2-3, 7-8, 10, 14-15, 17-29, 47-58, 110 128-130 and 132-135 depend from claims 1, 109 and 127 which are allowable for the reasons stated above, and further distinguish over the cited references. Claims 2-3, 7-8, 10, 14-15, 17-29, 47-58, 110, 128-130 and 132-135 are, therefore, allowable under 35 U.S.C. § 103(a). Accordingly, applicants respectfully request that the rejection of claims 2-3, 7-8, 10, 14-15, 17-29, 47-58, 110, 128-130 and 132-135 be withdrawn.

With respect to claim 18, applicants respectfully submit that Kennedy does not disclose, teach or suggest identifying capitalizations and patterns for words because it is not required to eliminate the duplicate response to a query, which is the stated purpose of Kennedy. As a result, applicants respectfully submit that claims 51-52 are allowable under 35 U.S.C. § 103(a).

With respect to claims 19-20 and 24, applicants respectfully submit that Kennedy does not disclose, teach or suggest the use of an acronym resolving algorithm because it is not required to eliminate the duplicate response to a query, which is the stated purpose of Kennedy. As a result, applicants respectfully submit that claims 19-20 and 24 are allowable under 35 U.S.C. § 103(a).

With respect to claims 51-52, applicants respectfully submit that Brown does not recompute an object network or recompute results as recited in claims 51-52. The cited portions of Brown describe iterations to determine the levels of a hierarchy, which is not recomputing an object network or recomputing results. As a result, applicants respectfully submit that claims 51-52 are allowable under 35 U.S.C. § 103(a).
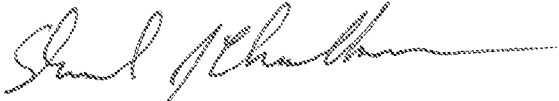
Conclusion

For the reasons set forth above, applicants respectfully request reconsideration by the examiner and withdrawal of the rejections. Applicants submit that claims 1-3, 7-8, 10-29, 45, 47-61, 68-69, 109-110, 127-135 and 151, as amended, are fully patentable. Applicants respectfully request that a timely Notice of Allowance be issued in this case. If the examiner has any questions or comments, or if further clarification is required, it is

requested that the examiner contact the undersigned at the telephone number listed below.

Date: September 13, 2010

Respectfully submitted,
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